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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,124	11/21/2003	Eric Holzle		1123

7590 05/17/2006

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EXAMINER

NEGIN, RUSSELL SCOTT

ART UNIT PAPER NUMBER

1631

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/707,124

Applicant(s)

HOLZLE, ERIC

Examiner

Russell S. Negin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Comments***

An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

A listing of registered patent attorneys and agents is available on the USPTO Internet web site <http://www.uspto.gov> in the Site Index under "Attorney and Agent Roster." Applicants may also obtain a list of registered patent attorneys and agents located in their area by writing to the Mail Stop OED, Director of the U. S. Patent and Trademark Office, PO Box 1450, Alexandria, VA 22313-1450.

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

There is no forward slash in front of the electronic signature. The declaration is considered unsigned without the presence of the forward slash.

### ***Drawings***

The drawings are objected to because the term "posess" is spelled incorrectly in Figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is ambiguous as to whether the alleles in step (c) of each claim correspond to the MHC profiles of step (b), or if the alleles represent any allele in general.

In addition, it is indefinite as to exactly what "commonalities" refer (i.e. sequence homology). Clarification is required.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-3 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In regards to claims 1-3, the instant claims are drawn to a grouping algorithm. A grouping algorithm is non-statutory unless the claims include a step of physical transformation, or if the claims include a useful, tangible and concrete result. It is important to note, that the claims themselves must include a physical transformation step or a useful, tangible and concrete result in order for the claimed invention to be statutory. It is not sufficient that a physical transformation step or a useful, tangible, and concrete result be asserted in the specification for the claims to be statutory. In the instant claims, there is no step of physical transformation, thus the Examiner must determine if the instant claims include a useful, tangible, and concrete result.

In determining if the instant claims are useful, tangible, and concrete, the Examiner must determine each standard individually. For a claim to be "useful," the claim must produce a result that is specific, substantial, and credible. For a claim to be "tangible," the claim must set forth a practical application of the invention that produces a real-world result. For a claim to be "concrete," the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. Furthermore, the claim must recite a useful, tangible, and concrete result in the claim itself, and the claim must be limited only to statutory embodiments. Thus, if the claim is broader than the statutory embodiments of the claim, the Examiner must reject the claim as non-statutory.

The instant claims do not include any tangible result. The claim must set forth a practical application of the grouping algorithm to produce a real-world result. Possible remedies include output of a result to a computer display, computer readable memory, or to another computer on a computer network. Also, other possibilities include a physical transformation such as a blood test. Applicant is advised that any alterations cannot introduce any new matter to the original disclosure.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiserodt et al. [USPAT 6,207,147].

Claims 1-3 of Hiserodt et al state:

1. A method of matching human beings with others, comprising the steps of: (a) assembling and/or defining a population of human participants, physically and/or virtually, to be matched amongst themselves and/or any future or past participants in the context of a dating service, dating services, or other social groups or organizations; (b) producing, assembling, and/or observing the class I and class II MHC profiles, in any part or in whole, of all or any fraction of the participants; (c) comparing said profiles of some or all of the participants with said profiles of others and rating the degree of compatibility between any two or more people according to the number of alleles they have in common, where fewer commonalities represent a greater degree of compatibility; (d) matching said participants based on said comparisons.
2. A method of matching human beings with others, comprising the steps of: (a) assembling and/or defining a population of human participants, physically and/or virtually, to be matched amongst themselves and/or any future or past participants in the context of a dating service, dating services, or other social groups or organizations; (b) producing, assembling, and/or observing the class I and class II MHC profiles, in any part or in whole, of all or any fraction of the participants, where said profiles include the HLA-A and HLA-B loci in the class I region, and the DRB1 locus in the class II region; (c) comparing said profiles of some or all of the participants with said profiles of others and rating the degree of compatibility between any two or more people according to the number of alleles they have in common, where fewer commonalities represent a greater degree of compatibility; (d) matching said participants based on said comparisons.
3. A method of matching human beings with others, comprising the steps of: (a) assembling and/or defining a population of human participants, physically and/or virtually, to be matched amongst themselves and/or any future or past participants in the context of a dating service, dating services, or other social groups or organizations; (b) producing, assembling, and/or observing the class I and class II MHC profiles of all or any fraction of the participants, where said profiles include the HLA-A and HLA-B loci in the class I region, and the DRB1 locus in the class II region; (c) comparing said profiles of some or all of the participants with said profiles of others and rating the degree of compatibility between any two or more people according to the number of alleles they have in common, where fewer commonalities represent a greater degree of compatibility; (d) matching said participants based on said comparisons.

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The patent of Hiserodt et al is a "Cancer immunotherapy using tumor cells combined with mixed lymphocytes." In this reference patent, the group of human beings being pooled (and screened) is blood donors. As stated in column 7, lines 1-5, "The allogeneic lymphocytes are typically isolated from peripheral blood of a suitable donor, and may optionally be genetically altered to express a cytokine at an elevated level, particularly IL-2, IL-4, GM-CSF, TNK- $\alpha$  or M-CSF, or any combination thereof."

The remaining portion of the invention is anticipated in column 15 of Hiserodt et al., lines 41-62, which state:

Cells are generally described as allogeneic if they bear a phenotypic difference sufficient to stimulate an alloreaction. In the context of this disclosure, use of the term "allogeneic" is restricted to a difference in phenotype of major histocompatibility complex (MHC) antigens. Any qualitative difference in the identity of MHC allotypes between cells of the same species means they are allogeneic cells. In humans, differences at any of the HLA-A, B, C, D, DP, DQ, and DR loci constitute allotypic differences relevant for this invention. Identity of HLA-A, B, C, DP, DQ, and DR are typically determined using allotype-specific antibodies in a cytotoxicity or immunofluorescence technique. Preferred allotypic differences for the purposes of the present invention relate to HLA class II antigens. Comparing the class II antigens of the DP, DQ, and DR loci between the putative allogeneic cells and cells of the subject to be treated, preferably at least 1, and increasingly more preferably 2, 3, 4, 5, or even 6 loci are different between allogeneic cells. Class II antigens may also be determined at the D locus by mixed lymphocyte reaction using typed cells. Donors of allogeneic cells are generally unrelated to the subject being treated, to maximize the number of MHC mismatches.

Thus, in this case, humans are being matched based on different genetics regarding the MHC complexes for both class I MHC and class II MHC.

### ***Conclusion***

No Claim is allowed.



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Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the central PTO Fax Center. The faxing of such pages must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The Central PTO Fax Center Number is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Negin, Ph.D., whose telephone number is (571) 272-1083. The examiner can normally be reached on Monday-Friday from 7am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Andrew Wang, Supervisory Patent Examiner, can be reached at (571) 272-0811.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (571) 272-0549.

Information regarding the status of the application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information on the PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

-RSN 5/11/06

*RSN 5/11/06*

*John S. Brusca 12 May 2006*

**JOHN S. BRUSCA, PH.D  
PRIMARY EXAMINER**